

The Acquisition Chart

A Road Map for Use by Program Managers Throughout the System Life Cycle

PAUL MCILVAINE

The increase in complexity of defense systems, coupled with rapid technological progress, requires the use of functional specialists who understand the technology, advocate "best practices," and execute necessary actions within the framework of their specific discipline. Concurrently, the need for interdisciplinary managers [a.k.a., generalists] to "integrate" the technology and "tie together" the efforts of these specialists toward common objectives remains just as great.

The Department of Defense has addressed this challenge by the use of the program manager — a single individual responsible for a defense system, supported by cross-functional teams composed of specialists and generalists. These teams are known as Integrated Product Teams (IPT). The best way to model this interaction is in the form of a matrix.

Intermediate groupings of functional specialists can assist in tying the technology together and facilitating smoother integration. Elvin Isgrig, in his 1984 study, "Integration: An Interdisciplinary Study of Project/Program Management," identified three intermediate groupings of specialists. Technical groupings generally consist of systems engineering; software; test and evaluation; manufacturing and production; and acquisition logistics. Business groupings usually consist of contract management and funds management. Administrative groupings can be expected to include acquisition policy; program management and leadership; and earned value management. Technical, business, and administrative managers are the key linkages between the functional specialists and generalists. Many program management offices organize themselves along the lines of these groupings.

A good analogy is that of an orchestra. Functional specialists who play violins, viola, and cello make up the intermediate grouping known as the string section. Add the woodwinds, brass, percussion, and horns; you then have all the components necessary to make up an orchestra. The score (Program Management Plan or Single Acquisition Management Plan) represents the common objective of each "player." The "concert-master or first chair of violins" [for example] performs "intermediate integration" of the violin section in support of the conductor. The conductor (or program manager) is responsible for overall integration of the efforts of each player and section. He or she strives to develop ensemble by working as a team to appropriately interpret the score. The measure of the orchestra (or how well the system performs) is in the harmony and synchronization of each element that performs "as one."

The Defense Systems Acquisition Management Process Chart ("The Acquisition Chart") is now in its Eighth Edition and serves as a pictorial training aid, visually depicting the policy guidelines in the DoD 5000 series of documents [coupled with "best practices"].

The rows represent the functional specialists who follow the process outlined for their specific discipline. The columns represent the total effort underway at each point in a program, and how the generalists attempt to "tie together" or "integrate" the ongoing work of the functional specialists. The entire overall process is known as Integrated Product and Process

Development (IPPD). In practice, IPPD development is accomplished by multiple IPTs.

"The Acquisition Chart" depicts the entire life cycle ("cradle to grave") of a nominal defense acquisition program. To optimize the overall system, program managers must understand the contributions of the functional specialists (rows) within the integrating framework of the generalists (columns). Thus, "The Acquisition Chart" serves as not only a road map for program managers to use throughout the system life cycle, but also a training aid/template from which to design a "real world" course in program management.

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Editor's Note: A smaller version of "The Acquisition Chart" appears on the following four pages. Also, another smaller version of the chart can be downloaded and printed from the DSMC Home Page in Acrobat as a PDF file. To download, go to http://www.dsmc.dsm.mil/pubs/chart3000/ch_3000.htm on the DSMC Web site.

McIlvaine is currently a Professor of Engineering Management, Logistics Management Department, Faculty Division, DSMC. A Project Leader for eight versions of the Acquisition chart, over 100,000 copies have been distributed since the chart's inception in 1984. The author wishes to acknowledge Maestro Ernest Green, Conductor, Annapolis Chorale and Chamber Orchestra, for his assistance in preparing this article.

and, as a result, the model is not applicable to a variety of cases, including support, and (where applicable) dependent. The ERM ACT has defined California Domestic Partnership Law (CPL) as



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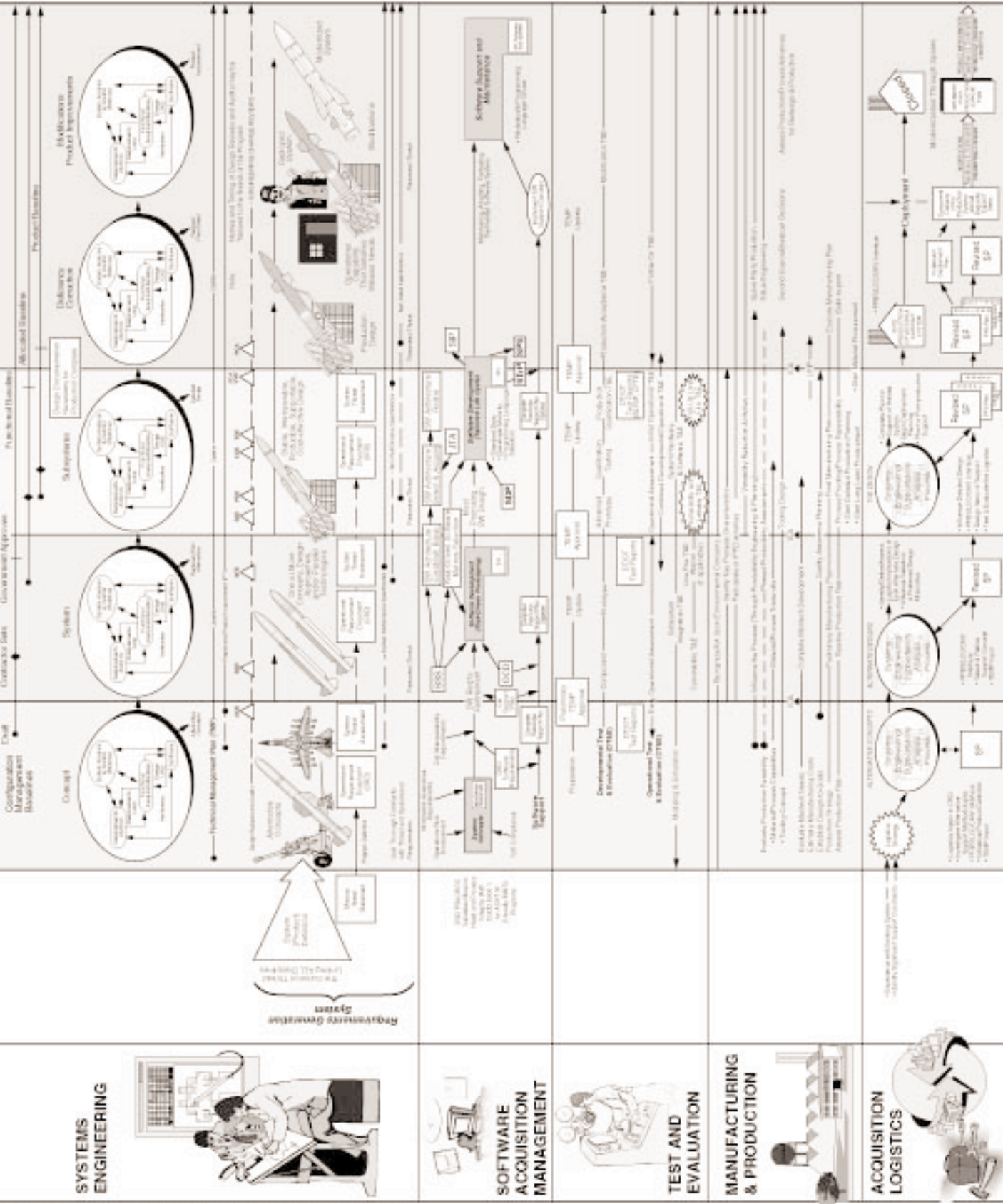
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RES (SUGGESTED BY DoD 5000.52) EXPECTED TO BE REPRESENTED ON VARIOUS IPTs

PHASE	PHASE 0 CONCEPT DEVELOPMENT (CC)	PHASE 1 PROGRAM/INITIAL REQUIREMENT (PRIR)	PHASE 2 EMERGING & BASIC ACQUISITION DEVELOPMENT (EMAD)	PHASE 3 PRODUCTION, FIELDING, SUPPORT, & OPERATIONAL SUPPORT
DECISION POINTS	<p>MS-0 Approval to Conduct Concept Studies</p> <ul style="list-style-type: none"> Approval of concept Approval of concept studies Approval of concept studies Approval of concept studies 	<p>MS-1 Approval to Begin Program Development</p> <ul style="list-style-type: none"> Approval of program development Approval of program development Approval of program development Approval of program development 	<p>MS-2 Approval to Enter Engineering & Manufacturing Development</p> <ul style="list-style-type: none"> Approval of engineering & manufacturing development Approval of engineering & manufacturing development Approval of engineering & manufacturing development Approval of engineering & manufacturing development 	<p>MS-3 Production of Fielding, Support, & Operational Support</p> <ul style="list-style-type: none"> Approval of production, fielding, support, & operational support Approval of production, fielding, support, & operational support Approval of production, fielding, support, & operational support Approval of production, fielding, support, & operational support
ACQUISITION POLICY	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>
PROGRAM MANAGEMENT AND LEADERSHIP	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>
EARNED VALUE MANAGEMENT	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>
CONTRACT MANAGEMENT	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>
FUNDS MANAGEMENT	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>	<p>Planning</p> <p>Organizing & Staffing</p> <p>Controlling</p> <p>Leading</p>

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NOTES ON TABLEING
1. The number of releases requests and program phases shall be determined by the Mission (the new Authority, P&A) for each release program of acquisition release.
2. This document applicable to a particular program of acquisition release shall be determined individually for each program through the RTI process and the MCM, approved process.



